



State of New Hampshire
DEPARTMENT OF ENVIRONMENTAL SERVICES

6 Hazen Drive, P.O. Box 95, Concord, NH 03302-0095
(603) 271-3503 FAX (603) 271-5171



September 12, 2002

Reginald Moreau
R. J. Moreau Company
24 Eastman Avenue Unit C-2
Bedford, New Hampshire 03110

LETTER OF DEFICIENCY# WSEB 02-104
CERTIFIED MAIL# 7099 3400 0003 0692 3300

Subject: Bow - Public Water System: Cottages at the Wind Chimes (EPA# 0262040)

Dear Mr. Moreau:

The records of the Department of Environmental Services (DES) show that the Cottages at the Wind Chimes water system is classified as a public water system (PWS), as defined by RSA 485:1-a. A PWS is defined as any water system supplying 15 or more services, or 25 or more people for 60 or more days per year. As such, the water system owner is required to comply with NH Admin. Rule Env-Ws 300 - *New Hampshire Drinking Water Rules*. Env-Ws 378.06, *Site Selection of Small Production Wells for Community Water Systems, Sanitary Protective Area*, requires that all land in a sanitary protective area (SPA) of a public water supply well be owned or controlled by the owner of the water system. Furthermore, this rule requires that the SPA be maintained in a natural state, and that the only facilities or activities that may be located or occur within the SPA be limited to those that are directly associated with operating and maintaining the water supply system. For Cottages at the Wind Chimes, the SPA for the bedrock well is delineated by a circle with a 175-foot radius centered on the well.

On June 26, 27, and July 11, 2002, DES staff conducted site visits to the Cottages at Wind Chimes water system. During the site visits, it was observed that several structures and activities at the development violate the SPA restrictions of Env-Ws 378.06. DES has specifically identified the following violations:

- The wetland north of and adjacent to the well has been cleared. The rest of the SPA is cleared, stumped, and the natural terrain altered. This activity violates Env-Ws 378.06(e).
2. A runoff detention pond is located approximately 146' southeast of the well. The perimeter of the pond has been grassed and domestic geese are living in the pond. This construction and the ongoing existence of the detention pond violate Env-Ws 378.06(e) and (f).
 3. A drainage swale is located 58' south of the well, backed by a berm comprised of unknown fill material. Both have been loamed and seeded. The construction of the swale violates Env-Ws 378.06(e). It also appears that the area has been seeded, loamed, and is available for public recreation. This activity would violate Env-Ws 378.06(a) and (e).
 4. A retaining wall faced with boulders is located approximately 110' north of the well. North of this wall are two large piles of stockpiled loam and rocks. This activity violates Env-Ws 378.06(e).
 5. Trailers that were storing construction materials including hydraulic fluids for construction equipment were staged immediately adjacent to the water treatment building, which is located within the SPA. This activity violates Env-Ws 378.06(e).

6. A residence is being constructed northeast of the stockpiled loam potentially within the SPA. This activity would be a violation of Env-Ws 378.06(d), (e), and (g).

Each of the violations above poses a potential for contamination of the water supply.

Also please note that during the site visits, that NHDES learned that two additional residences are proposed for the area north of the retaining wall in the area presently housing the loam piles. The yards and perhaps the proposed buildings themselves are planned to be located within the SPA.

The August 15, 2000 final approval (copy enclosed) for the new bedrock well #1 at Wind Chimes clearly states that the SPA shall remain in a natural state. Furthermore, the Preliminary Report (July 10, 2000) required by Env-Ws 378.11 and the Final Report (August 2, 2001) required by Env-Ws 378.20 that your consultant (Lewis Companies) submitted on your behalf contained information and site plans that indicated the activities in, and the ownership of, the SPA would be maintained in accordance with the requirements of Env-Ws 378.06. The water system must implement mitigation activities in order to bring the SPA of the well back into compliance with Env-Ws 378.06 or it will be subject to administrative action which may include rescinding the approval for the use of the bedrock well and appropriate penalties.

DES believes the SPA violations can be corrected and future violations prevented by taking the following actions:

- 1 **Immediately**, cease any further construction or site work within the 175-foot SPA; and
2. **By October 4, 2002**, retain the services of a qualified engineer, water system, and /or hydrogeological consultant to study the water system's deficiencies. This analysis should include an assessment of how the violations listed above may have impacted groundwater quality. In order to complete the assessment a detailed description of the material and methods being used to landscape the SPA should be provided; and
- 3 **By October 31, 2002**, submit to NHDES for review a copy of the engineer/consultant's finding and recommendations, along with a implementation schedule with dates to correct the listed deficiencies; and
4. **By October 31, 2002**, submit addendums to both the Preliminary and Final Well Siting reports to correct all discrepancies between these reports, and the final as-built layout and ownership of the features and property of the development. The as-built plans should specifically identify the location of all structures (including underground utilities) and activities within the SPA.

In the event compliance is not achieved within this period, DES may take further enforcement action, including issuing an order requiring the deficiencies be corrected, initiating an administrative fine proceeding and/or referring the matter to the NH Department of Justice for imposition of appropriate penalties.

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Please contact Diana Morgan at (603) 271-2854 or dmorgan@des.state.nh.us if you have any questions regarding this letter.

Sincerely,



Anthony P. Giunta, P.G., Administrator
Water Supply Engineering Bureau

Enclosure: August 15, 2000 approval letter

cc: Gretchen Rule, DES Legal Unit
Rene Pelletier, DES
Sarah Pillsbury, DES
James Gill, DES
Kevin Riel, DES
Collis Adams, DES
Mary-Ann Tilton, DES
Christopher Countie, Primary Operator
Neil Helberg, Lewis Cos.
Ethan Howard Jr., Town of Bow Health Officer

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DEPARTMENT OF ENVIRONMENTAL SERVICES

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August 15, 2000

Neil Helberg
Lewis Companies
44 Stark Lane
Litchfield, New Hampshire 03052

**Subject: CWS BOW: Wind Chimes (Bow Elderly Housing); EPA ID # New System;
New Bedrock Well # 1**

Dear Mr. Helberg:

The purpose of this letter is to approve the subject well. This decision was based on a review of your July 10, 2000 Final Report for Cottages At Wind Chimes in Bow, submitted to meet the requirements of New Hampshire Administrative Rule Env-Ws 378 *Site Selection of Small Production Wells for Community Water Systems*.

A copy of this letter should be kept on file with your water system's records for future reference and as an aid to meeting the Department's source water protection requirements.

Please note that approval to connect the well must be obtained under Env-Ws 372, *Design Standards for Small Public Drinking Water Systems*. Contact Jim Gill at 271-2949 for further information.

Source Specifications:

EPA ID #	Source ID #	Permitted Production Volume	Sanitary Protection Area Radius	Wellhead Protection Area Radius	Source Description
New System	001	28,800 Gallons	175 Feet	2,050 Feet	BRW 1, 40' SW of pump house

The table above outlines the specifications for the new well. The Permitted Production Volume (PPV) is the maximum volume that may be pumped in any 24-hour period. The PPV is as shown above. The Wellhead Protection Area for source 005 is a circle, centered on the well, with the radius listed in the table. This is the area within which educational materials must be periodically distributed as part of the wellhead protection program. The first round of distribution must be completed before **November 15, 2000**. The sanitary protective area is a circle, centered on the well, with the radius listed in the table. The sanitary protective area shall remain in a natural state and under the water system's control.

Neil Helberg
Wind Chimes/Bow
August 15, 2000
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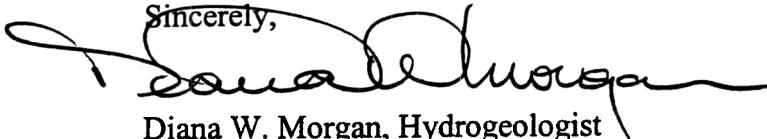
Chemical Monitoring Program:

EPA ID #	Source ID#	Laboratory Sample Numbers
New System	001	Granite State Analytical: 6-676-1; 6-674-1; 6-677-1 Pedneault: 7-002-1

The June 30, 2000 water quality sample for the new well listed in the table above will be forwarded to the Department's Chemical Monitoring Program. The sample identification numbers are listed in the table above. Contact Jeanne Lawson at **271-6703** within one week of start-up to obtain a chemical monitoring schedule for the new well.

If you have any questions about this letter or any other well siting issues, feel free to call me at **271-2947**.

Sincerely,



Diana W. Morgan, Hydrogeologist
Water Supply Engineering Bureau

cc: Jim Gill, NHDES
Jim Mullaney, Canterbury Manor
Laurie Cullerot, NHDES
Jeanne Lawson, NHDES
Dave Reid, NHDES
Rick Schofield, NHDES